ATGGCCCAAGCCCTGCCCTGGCTCCTGCTGTGGATGGGCGCGGGAGT GCTGCCTGCCCACGCACCAGCACGCATCCGGCTGCCCCTGCGCA GCGGCCTGGGGCGCCCCCTGGGGCTGCCCCCGGGAGAC CGACGAAGAGCCCGAGGAGCCCGGCCGGAGGGCAGCTTTGTGGAGA TGGTGGACAACCTGAGGGGCAAGTCGGGGCCAGGGCTACTACGTGGAG ATGACCGTGGGCAGCCCCCGCAGACGCTCAACATCCTGGTGGATACA 5% CGCTACTACÇAGAGGCAGCTGTCCAGCACATACCGGGACCTCCGGAAG GGTGTGTATGTGCCCTACACCCAGGGCAAGTGGGAAGGGGAGCTGGG CAACATTGCTGCCATCACTGAATCAGACAAGTTCTTCATCAACGGCTCC AACTGGGAAGGCATCCTGGGGCTGGCCTATGCTGAGATTGCCAGGCCT GACGACTCCTGGAGCCTTTCTTTGACTCTCTGGTAAAGCAGACCCACG TTCCCAACCTCTTCTCCCTGCAGCTTTGTGGTGCTGGCTTCCCCCTCAA CCAGTCTGAAGTGCTGGCCTCTGTCGGAGGGAGCATGATCATTGGAGG TATCGACCACTCGCTGTACACAGGCAGTCTCTGGTATACACCCATCCGG CGGGAGTGGTATTATGAGGTGATCATTGTGCGGGTGGAGATCAATGGA CAGGATCTGAAAATGGACTGCAAGGAGTACAACTATGACAAGAGCATTG TGGACAGTGGCACCACCAACCTTCGTTTGCCCAAGAAAGTGTTTGAAGC TGCAGTCAAATCCATCAAGGCAGCCTCCTCCACGGAGAAGTTCCCTGAT GGTTTCTGGCTAGGAGAGCAGCTGGTGTGCTGGCAAGCAGGCACCACC CCTTGGAACATTTTCCCAGTCATCTCACTCTACCTAATGGGTGAGGTTAC CAACCAGTCCTTCCGCATCACCATCCTTCCGCAGCAATACCTGCGGCCA GTGGAAGATGTGGCCACGTCCCAAGACGACTGTTACAAGTTTGCCATCT CACAGTCATCCACGGGCACTGTTATGGGAGCTGTTATCATGGAGGGCTT CTACGTTGTCTTTGATCGGGCCCGAAAACGAATTGGCTTTGCTGTCAGC GCTTGCCATGTGCACGATGAGTTCAGGACGGCAGCGGTGGAAGGCCCT ATGAGTCAACCCTCATGACCATAGCCTATGTCATGGCTGCCATCTGCGC CCTCTTCATGCTGCCACTCTGCCTCATGGTGTCAGTGGCGCTGCCTC CGCTGCCTGCGCCAGCAGCATGATGACTTTGCTGATGACATCTCCCTGC **TGAAG** 

FIG. 1A

CCATGCCGGCCCTCACAGCCCCGCCGGGAGCCCGAGCCCGCTGCCCAGGCTGGC CGCCGCSGTGCCGATGTAGCGGGCTCCGGATCCCAGCCTCTCCCCTGCTCCCGTGC TCTGCGGATCTCCCCTGACCGCTCTCCACAGCCCGGACCCGGGGGGCTGGCCCAGG GCCTGCAGGCCCTGGCGTCCTGATGCCCCCAAGCTCCCTCTCCTGAGAAGCCACC AGCACCACCAGACTTGGGGGCAGGCGCCAGGGACGGACGTGGGCCAGTGCGAGC CCAGAGGCCCGAAGGCCGGGCCCACCATGGCCCAAGCCCTGCCCTGGCTCCTG CTGTGGATGGGCGCGGGAGTGCTGCCTGCCCACGGCACCCAGCACGGCATCCGGC TGCCCTGCGCAGCGGCCTGGGGGGCGCCCCCCTGGGGCTGCCCCGGG AGACCGACGAAGAGCCCGAGGAGCCCGGCCGGAGGGCAGCTTTGTGGAGATGGT GGACAACCTGAGGGCAAGTCGGGGCAGGGCTACTACGTGGAGATGACCGTGGGC AGCCCCCGCAGACGCTCAACATCCTGGTGGATACAGGCAGCAGTAACTTTGCAGT GGGTGCTGCCCCCACCCCTTCCTGCATCGCTACTACCAGAGGCAGCTGTCCAGCA CATACCGGGACCTCCGGAAGGGTGTGTATGTGCCCTACACCCAGGGCAAGTGGGAA GGGGAGCTGGCACCGACCTGGTAAGCATCCCCCATGGCCCCAACGTCACTGTGCG ## TGCCAACATTGCTGCCATCACTGAATCAGACAAGTTCTTCATCAACGGCTCCAACTGG # GAAGGCATCCTGGGGCTGGCCTATGCTGAGATTGCCAGGCCTGACGACTCCCTGGA GCCTTTCTTTGACTCTCTGGTAAAGCAGACCCACGTTCCCAACCTCTTCTCCCTGCAG CTTTGTGGTGCTGGCTTCCCCCTCAACCAGTCTGAAGTGCTGGCCTCTGTCGGAGG GAGCATGATCATTGGAGGTATCGACCACTCGCTGTACACAGGCAGTCTCTGGTATAC ACCCATCCGGCGGGAGTGGTATTATGAGGTGATCATTGTGCGGGTGGAGATCAATG GACAGGATCTGAAAATGGACTGCAAGGAGTACAACTATGACAAGAGCATTGTGGACA GTGGCACCACCACCTTCGTTTGCCCAAGAAAGTGTTTGAAGCTGCAGTCAAATCCA TCAAGGCAGCCTCCTCCACGGAGAAGTTCCCTGATGGTTTCTGGCTAGGAGAGCAG CTGGTGTGCTGCAAGCAGGCACCACCCCTTGGAACATTTTCCCAGTCATCTCACTC TACCTAATGGGTGAGGTTACCAACCAGTCCTTCCGCATCACCATCCTTCCGCAGCAA ## TACCTGCGGCCAGTGGAAGATGTGGCCACGTCCCAAGACGACTGTTACAAGTTTGCC ## ATCTCACAGTCATCCACGGGCACTGTTATGGGAGCTGTTATCATGGAGGGCTTCTAC GTTGTCTTTGATCGGGCCCGAAAACGAATTGGCTTTGCTGTCAGCGCTTGCCATGTG CACGATGAGTTCAGGACGGCAGCGGTGGAAGGCCCTTTTGTCACCTTGGACATGGA AGACTGTGGCTACAACATTCCACAGACAGATGAGTCAACCCTCATGACCATAGCCTA TGTCATGGCTGCCATCTGCGCCCTCTTCATGCTGCCACTCTGCCTCATGGTGTCA GTGGCGCTGCCTGCCTGCGCCAGCAGCATGATGACTTTGCTGATGACATCT CCCTGCTGAAGTGAGGAGGCCCATGGGCAGAAGATAGAGATTCCCCTGGACCACAC CTCCGTGGTTCACTTTGGTCACAAGTAGGAGACACAGATGGCACCTGTGGCCAGAG CACCTCAGGACCCTCCCCACCCACCAAATGCCTCTGCCTTGATGGAGAAGGAAAAG GCTGGCAAGGTGGGTTCCAGGGACTGTACCTGTAGGAAACAGAAAAAGAGAAAAG AAGCACTCTGCTGGCGGGAATACTCTTGGTCACCTCAAATTTAAGTCGGGAAATTCT GCTGCTTGAAACTTCAGCCCTGAACCTTTGTCCACCATTCCTTTAAATTCTCCAACCC **AAAGTATTCTTCTTTAGTTTCAGAAGTACTGGCATCACACGCAGGTTACCTTGG** CGTGTGTCCCTGTGGTACCCTGGCAGAGAAGAGACCAAGCTTGTTTCCCTGCTGGC CAAAGTCAGTAGGAGAGGATGCACAGTTTGCTATTTGCTTTAGAGACAGGGACTGTA TAAACAAGCCTAACATTGGTGCAAAGATTGCCTCTTGAATT

MAQALPWLLLWMGAGVLPAHGTQHGIRLPLRSGLGGAPLGLRLP
RETDEEPEEPGRRGSFVEMVDNLRGKSGQGYYVEMTVGSPPQT
LNILVDTGSSNFAVGAAPHPFLHRYYQRQLSSTYRDLRKGVYVPY
TQGKWEGELGTDLVSIPHGPNVTVRANIAAITESDKFFINGSNWE
GILGLAYAEIARPDDSLEPFFDSLVKQTHVPNLFSLQLCGAGFPLN
QSEVLASVGGSMIIGGIDHSLYTGSLWYTPIRREWYYEVIIVRVEIN
GQDLKMDCKEYNYDKSIVDSGTTNLRLPKKVFEAAVKSIKAASST
EKFPDGFWLGEQLVCWQAGTTPWNIFPVISLYLMGEVTNQSFRIT
ILPQQYLRPVEDVATSQDDCYKFAISQSSTGTVMGAVIMEGFYVV
FDRARKRIGFAVSACHVHDEFRTAAVEGPFVTLDMEDCGYNIPQ
TDESTLMTIAYVMAAICALFMLPLCLMVCQWRCLRCLRQQHDDF
ADDISLLK

FIG. 2A

The second secon

ETDEEPEEPGRRGSFVEMVDNLRGKSGQGYYVEMTVGSPPQT
LNILVDTGSSNFAVGAAPHPFLHRYYQRQLSSTYRDLRKGVYVPY
TQGKWEGELGTDLVSIPHGPNVTVRANIAAITESDKFFINGSNWE
GILGLAYAEIARPDDSLEPFFDSLVKQTHVPNLFSLQLCGAGFPLN
QSEVLASVGGSMIIGGIDHSLYTGSLWYTPIRREWYYEVIIVRVEIN
GQDLKMDCKEYNYDKSIVDSGTTNLRLPKKVFEAAVKSIKAASST
EKFPDGFWLGEQLVCWQAGTTPWNIFPVISLYLMGEVTNQSFRIT
ILPQQYLRPVEDVATSQDDCYKFAISQSSTGTVMGAVIMEGFYVV
FDRARKRIGFAVSACHVHDEFRTAAVEGPFVTLDMEDCGYNIPQ
TDESTLMTIAYVMAAICALFMLPLCLMVCQWRCLRCLRQQHDDF
ADDISLLK

FIG. 2B

Will Then By I Well I

#### FIG. 3A

MAQALPWLLLWMGAGVLPAHGTQHGIRLPLRSGLGGAPLGLRLPRETDEEPE EPGRRGSFVEMVDNLRGKSGQGYYVEMT

VGSPPQTLNILVDTGSSNFAVGAAPHPFLHRYYQRQLSSTYRDLRKGVYVPYT QGKWEGELGTDLVSIPHGPNVTVRANI

AAITESDKFFINGSNWEGILGLAYAEIARPDDSLEPFFDSLVKQTHVPNLFSLQL CGAGFPLNQSEVLASVGGSMIIGGI

DHSLYTGSLWYTPIRREWYYEVIIVRVEINGQDLKMDCKEYNYDKSIVDSGTTNL RLPKKVFEAAVKSIKAASSTEKFPD

GFWLGEQLVCWQAGTTPWNIFPVISLYLMGEVTNQSFRITILPQQYLRPVEDVA TSQDDCYKFAISQSSTGTVMGAVIME

GFYVVFDRARKRIGFAVSACHVHDEFRTAAVEGPFVTLDMEDCGYNIPQTDED YKDDDDK

#### FIG. 3B

ETDEEPERGRRGSFVEMVDNLRGKSGQGYYVEMT

VGSPPQTLNILVDTGSSNFAVGAAPHPFLHRYYQRQLSSTYRDLRKGVYVPYT QGKWEGELGTDLVSIPHGPNVTVRANI

AAITESDKFFINGSNWEGILGLAYAEIARPDDSLEPFFDSLVKQTHVPNLFSLQL CGAGFPLNQSEVLASVGGSMIIGGI

DHSLYTGSLWYTPIRREWYYEVIIVRVEINGQDLKMDCKEYNYDKSIVDSGTTNL RLPKKVFEAAVKSIKAASSTEKFPD

GFWLGEQLVCWQAGTTPWNIFPVISLYLMGEVTNQSFRITILPQQYLRPVEDVA TSQDDCYKFAISQSSTGTVMGAVIME

GFYVVFDRARKRIGFAVSACHVHDEFRTAAVEGPFVTLDMEDCGYNIPQTDED YKDDDDK

<u>c</u>

## FIG. 4

NH2-K-T-E-E-I-S-E-V-N-Sta-V-A-E-F-COOH

The second of th

THE STATE OF THE S
KAOALPWILLWHGAGYLPAHGTOHGIRLPLRSGLGGAPLGLRLPRETOEEPEE
COCCOCAGOGA CONTROTO CANA CONTRACTO COCANA COCTACTACO TO CANA CONTRACCO COCCOCA CANA CONTROTO CANA CONTROCA CON
Violegion?
C R R G S F V E N V U N L N V U N V V V V V V V V V V V V V V V V
TITCTGCATCGCTACTACCAGAGCTGTCCAGCACATACCGGGAGCTCCGGAAGGGTGTGTATGTGCCCTACACCCAGGGCAAGGGGAGGTGGGCACCTGGCACCTGGCCCCAAGGTGGGGAGCTGCGAAGGTGGGAAGATT 480
FLYRYYOROLS STYROLRKG V Y V P Y T O G K W E G E L G T O L V S I P . H G P N V T V R A N I
ų
[N-glycos] N Y S I L G L A Y A E I A R P O O S L E P F F O S L Y K O T H V P N L F S L
TGAAGTGCTGGCCTCTGTCGGAGGAGCATGATCATTGGAGG
N-glycos N O S K I V S V G S K I I G G I D H S L Y T P I R R K Y Y E V I I V R V
ATGACAAGAGCATTGT
Acilya D A A K S 1 K A A S S T E K F P D
CCAGICATCICACTOTACCIAATGGGTGAGGTTACCAACCAGTG
N-9Vcos)
CATCCACGGGCACTGTTATGGGAGCTGTTAT
A TSOOCYKEALSOSSIGIV M G A VIHEGFY VYFORARKRIGFA V SACHYHOEFR
GACGEGAGEGETGAAGGECCTITIGICACCTIGGAGATGGAAGACTGIGGCTACAACATTCCACAGATGAGTCAACCCTCATGACCATAGCCTATGTCATGGCGCCATCTGCCCACTTTGCTGCCACTCTGCCACTCTGCCTCATGTGTGTG
GYNIPOTDESTLHTIAY MAA
CGCTGCCTGCCTGCCTGCCAGCAGCATOTTGCTGATGACATCTCCCTGCTGAAGTGA 1506 R C L R C L R Q 0 H 0 0 F A 0 D 1 S L L K

| Fig. 6A | Fig. 6B | Fig

FIG. 7

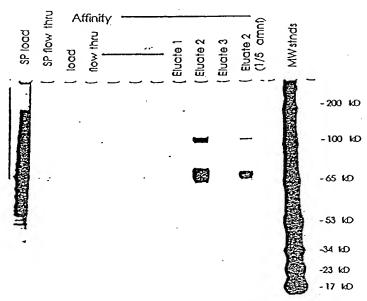
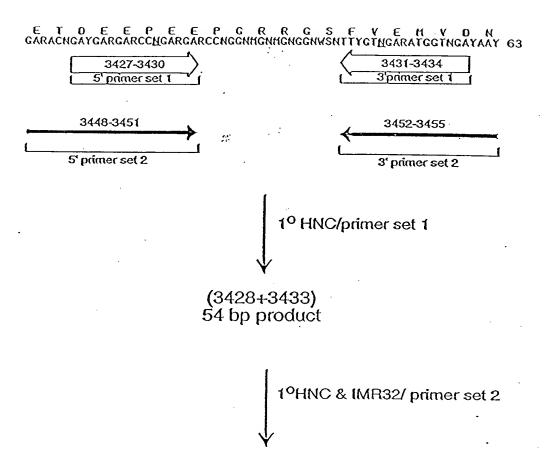


FIG. 8

thr.		Afficity	,				lard
SP flow t	SP load	00 00	Flow thru	Eluate 1	Elucte 2	Eluate 3	293T stand



72 bp product

#### sequence:

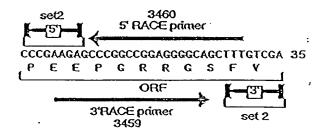


FIG. 9

Haran Lagainseq pas/Aulmahn 217 (11 cons pas/Aulmahn 217 (11 cons pas/Aulmahn 217 (11 cons pas/Aulmahn Brain (17 cons pas/Aulmahn Hall cons Haren Lagainseq Pas/Aulmahn 217 (11 cons pas/Aulmahn 217 (11 cons pas/Aulmahn 217 (11 cons pas/Aulmahn Erain (17 cons pas/Aulmahn Brain (17 cons pas/Aulmahn Hall cons pas/Aulmahn Hall cons	Haran Impalin.seq pes/Autowain E17 #11 cons pes/Autowain E17114 cons pes/Autowain Barain #17 cons pes/Autowain Barain #17 cons pes/Autowain #18 cons	Huma Impain.seq pss/AuImPain E17   11 cms pss/AuImPain E17114 cms pss/AuImPain brain.   117 cms pss/AuImPain Brain   117 cms pss/AuImPain H13 cms	Heran Impain.seq pss/AilinPain E17 #11 cors pss/AilinPain E17#14 cors; pss/AilinPain Endin #17 cors pss/AilinPain Brain #15 cors pss/AilinPain ##1 cors	Remain Inspain.seq p85/AlimPain E17 #11 cors p85/AlimPain E17#14 cors p85/AlimPain Beain #17 cors p85/AlimPain Beain #15 cors p85/AlimPain #83 cors	Haran Impain, seq pes/Hilmbain E17 iii cons pes/Hilmbain E17 iii cons pes/Hilmbain Brain iii cons pes/Hilmbain Brain iii cons pes/Hilmbain iii cons	Rran Impain.seq psc/ruinpain E17 #11 cors psc/ruinpain E11#10 cors psc/ruinpapain Smin #17 cors psc/ruinpapain Smain #15 cors psc/ruinpain #19 cons
RIGFAVSACHVHDEFRTAAVEGPFVTADHEDCGYNRIPAARGI RIGFAVSACHVHDEFRTAAVEGPFVTADHEDCGYNRIPAARGI RIGFAVSACHVHDEFRTAAVEGPFVTADHEDCGYNRIQ RIGFAVSACHVHDEFRTAAVEGPFVTADHED.GGYNRIQ RIGFAVSACHVHDEFRTAAVEGPFVTADHED.GYNRIPAARGIH.F.SGRRRGGDFIRFIVSRIN CLRCLROOHDDFADDISLLE.	EGTYVV753XXX	B GINMELLDYCACATANTOZOTHAZOZ ZXZZZYYYYXYXXXXXXXXXXXXXXXXXXXXXXXXX	CLO SNIZARALIAZAKMENELZZAMISDZATSKUIDDIIKSDDASYTKULDNIGEDVEDYOTSELINGIKALOXA POS SNIZANALIAZAKMENELZAKMISDZATSKUIDDIIKSDDASYTKULDNIGEDVEDTOTSELINGIK LOXA LOO SNIZANALIAZAKMENELZAKMISDZATSKUIDDIIKSDDASYTKULDNIGEDVOTSELIKEIKLOXA LOO SNIZANALIAZAKMENELZAMISDZATSKUIDDIIKSDDASYTKULDNIGESOTOTSELIKEIKLOXA EL SNIZANALIAZAKMENELZAMISDZATSKUIDDIIKSDDASYTKULDNIGESOTOTSELIKEIKLOXA TOS SNIZANALIAZAKMENELZAKMISDZATSKUIDDIIKSDDASYTKULDNIGESOTOTSELIKEIKLOXA	CD) ISCLICZTYSUCCZYYIZY, ATDITDZMNSDNIZZXUSZLIYYINYWALANGDHAISATULDIZDZMXDOLA TO DSCLICZTSUCCZYYTZY, YTDTIDZMNSDNILZXOSZLIYYINYWALANGDH ISATULDIZDZMXDOLA TO DSCLICZTSUCCZYTZY, YTDTIDZMNSDNIZZXOSZLIYYINYWALANGDH ISATULDIZDZMXDOLA TO DSCLICZTSUCCZYTZY, YTDTIDZMNSDNIZZXOSZLIYYINYWALANGDH ISATULDIZDZMXDOLA TO DSCLICZTSUCCZY, YTDTIDZMNSDNIZZXYYINYWALANGDH ISATULDIZDZMXDOLA	ES GALADWYTIQ WALLS TO WOANAWHI ZA HAYY UNY VAINS SDLOMI INTLOAAS DALKAAAAAUW 17 AAAD WYTO WALLS STOWOAXWY ZA HAYYY OAY WSS DLOANI NALOAAS DALHAAAAAAAD SWDWAAAA 17 AAAD WYTO WALS STOWOAXWY ZA HAYYY OAY WSS DLOANI NALOAA SOALHAAAAAAAD SWDWAAAA WA 18 AAAD WYTO WALS STOWOAXWY ZA HAYYY OAY WSS DLOANI NALOAAS SAALWAAAAAAAAAAAA 18 AAAAAAAAAAAAAAAAAAAAAAAA	BY ASSENDED. GINGLE RETURNED TO THE COLOR OF
は に に に に に に に に に に に に に	<u> </u>	gsesa gsesa	W 44 4 4 4 4 4	2		

(IG. 10

#### Concentration dependence of ß-secretase P1' mutant peptides

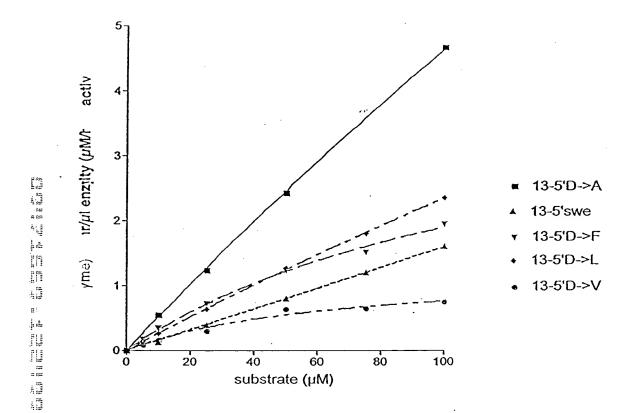


FIG. 11

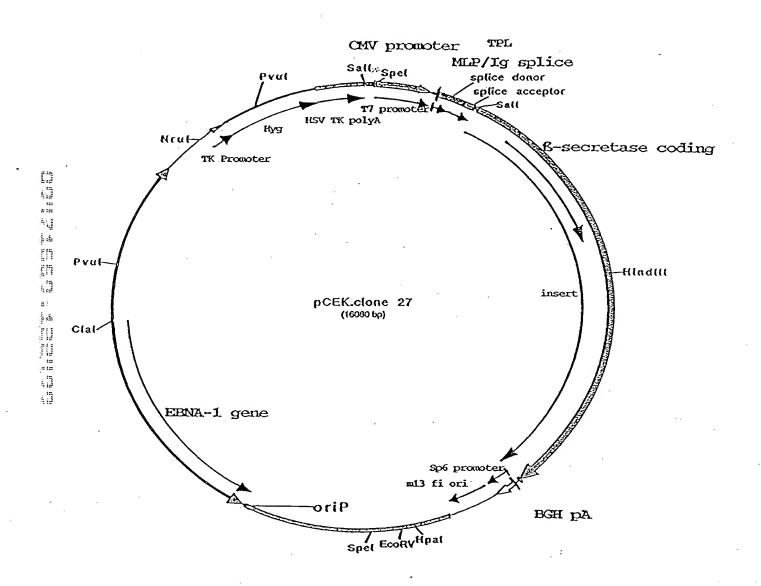


FIG. 12

# FIG. 13A

																		~ ^	~~~	~~ * *	C B TYC	~~^	Y-TAC	~~~	CAGA.	TATAC
	TICIC																									
107	OCCIT	GACA	TIGA	TAT	TCAC	TAGT	TATI	ATA	GTAA	TCAA	TTAC	0000	TCAT	TAGT	TCAT	AGCC	CATA	OTAT	GAGT	7000	OGT	ACAT	AACT	TACO		2001
	ATTTA																									
	GTACA																									
																										CTCCC
																										ATTAA
743	TACGA	CTCA	CTAI	.NOCC	AGAC	XXXXX	ccr	TGT	10000	7000	XXII	GAGC	ACAA	ACTO	TTOG	00G1	CTTT	CCAG	TACI	CPIG	GATC	XXXX	ACCC	GICG		COGAA
849	<b>OCC</b> TA	croc	XXXXX	looga	.GOGA	CO	.AGO	AGIX	) )	(TOG)	,0000	ATO	CAA	VACCI	cro	ACTO	TTOG	CGTC	AGTA	croc	CICI	CAN	VAGÓG	OGCA	TGAC	TICIG
955	CCCTA	AGAT	TGT	AGTT	TOCA	AAA)	OGA	GACC	CATT	GATA	TTC	CTC	2000	00000	TGAT	GOCI	TTGA	COGT	0000	XXXX	CAT	CTG	TCAG	AAAA	GACA	ATCTT
1061	TTIGI	TGTC	'AAG	TTG/	VOCTO	TG3	AGG	TIG	AGATY	-T000	CATA	cic	TGAC	TGAC	ZAATO	ACAT	CCAC	TTTC	CTT	ici	TCC/	ACAG	splice STGTC	CACT	cept CCA	or ccrcc
1167	AACTO	CVC	Sa(( STOG)	ACTC	raga(	2000	30GAI	ATIC	IGCA(	SATAT	roca1	CAC	CTC	XXX	ACTO	CTC	CCAC	;cccc	****	XXXXX	CTC	CGAG	20000	AGCT	GGAT	TATOG
1273	T0000	TGAC	CAC	CAAC	COCA	sece	CAGG	AGCC	OGGA	30007	rtgcc	CTV	XXXX	30000	2000	*****	30000	30000	ACC/	100GZ	VAGC	0000	ACCGC	•cocc	CCAT	
1379	00000	rcccz	4600	2000	200GC	AGCCC	2000	0000	CIGO	CAG	CTG	2000	20000	CTG(	CCA	IGTA	30000	CTC	XGGA"	rcccz	AGCC:	rcro	CCT	CTCC	XXXXX	CTCTG
1485	COGA	rcro	CCTV	GACO	3010	rocad	CAGO	cccc	ACCC		3CT0	3000	AGGG		EXACX	3000	rccc	FICCI	(GATY	30000	CAM	GCTO	ccrc	rccro	:AGA	GOCAC
	CAGC								~~~		~~~	~~~	~1130	GAGO	~AG	AGGG	200034	AAGG(	2000	33333	CACC	ATG	ccc	CAA	<u>cc</u>	CIG
6	CC S	Trp 1	Leu 🖰	Leu i	Leu '	Trp	Met	GIY .	Ala	Gy	vai	Leu	F 10 4	nia i	45	Σ,										
32	AGC (	GI y 1	Leu	G(y	G(y)	Ala	Pro	Leu	G y	Leu	K (g	Leu		N 19												
58	ecc :	Ser	Phe	Va (	Gu	Met	vai	ASP	<b>V</b> 2U	Leu	V 18	<u> </u>	<b>-,</b> -		<u>~ ,</u>											<b>—</b> .
	œ Pro											~~	*~~	NCT.	**	TTP	CCA .	CTG ·	CCT	CCT	coc	$\infty$	CAC	$\infty$	TTC (	CTG
	CAT												~~~	CNC	~~	or:	DAG.	CCT	CIC	TAT	GTG	$\infty$	TAC	ACC -	CAG	<b>GGC</b>
										~~~	~PR	*~	897	~~	CAT	ന	ന്ന	AAC	GTC	ACT	GTG	CCT	CCC	AAC	TTA	CCT
136	Lys	Tτρ	Gία	GIY	Gια	Leu	Gy	tttt	veh	Ceu.	141	~.	•••													
2156	GOC	ATC	ACT	GAA	TCA	GAC	AAG	TTC	TTC	ATC	AAC Asn	GGC GGC	TOC Sec	AAC Asn	TGG Trp	GAA:	GC Y	ATC 11e	CTG Leu	GGG GLY	CIG Leu	GCC At a	TAT Tyr	GCT Ala	GAG GI u	ATT ((e
												~~	- CT-CT-C	CTC	СТА	244	CAG	ACC.	CAC	GTT	$\infty$	AAC	CIC	TIC	TCC	CTG
188	s IA48	Arg	Pro	Asp	Asp	Ser	Leu	Giu	10	File	rue	wah	361													
21	L CAG	Leu	Cys	Ci y	a IA	GI Y	Phe	Pro	Leu	ASII	Gin	361	0.0													
24	ATC Of He	Asp	Hi s	Ser	Leu	Tyr	The	Gly	ser	Leu	t tp	ı yı	****			9					<u> </u>					
	—— ©© 0 0 A 49										8.00	CNC	•	200	CAG	TAC	AAC	TAT	GAC	AAG	AGC	ATI	GTG	GAC	AGT	OCC
													~	. ~~	CTC	AAA	W.	ATY:	AAG	GCA	. coc	100	100	ACG	GAG	AAG
29	2‡ Thr	The	Asn	Leu	Arg	Leu	Pro	Lys	Lys	Vai	me	Gu	Ata	~~~												
262	6 TTC 8 Phe	CCT	GAT	GIV	TTC	TOO	CTA	GIV	GAC GL	CAG GL n	CTG Leu	GTC Val	TOC Cys	100 Trp	CAA GIn	ACA Ala	GIY	The	The	Pro	Tre	AAG ASG	ATT	Phe	P10	Val
,,			- 14																							

### FIG. 13B

2704	ATC	TCA Sec	CIC	TAC	CTA	ATG	ogr	GAG G (	GTT Val	ACC The	AAC Aso	CAG	100	TTC	OCC A ra	ATC	, ACC The	ATC	CTT	000 P(0	CAG GL n	CAA	TAC	CTG Leu	CCC A ra	CCA Pro	
2782	CTC	GAA	GAT	CTG	œ	ACG	100	CAA	GAC	GAC	TGT	TAC	AAG	TTT	œ	ATC	TCA	CAG	TCA	100	ACC	0000	ACT	GTT	ATG	<b>OGA</b>	
370 2860	Val																										
3960	Ala	Val	He	Met	Сiu	GY	Phe	Τγι	Val	Val	Phe	Asp	A rg	Ala	Arg	Lys	Arg	He	Gγ	Phe	Ala	Val	Ser	Ala	Cys	Hű s	
2938 422	GIG Val	CAC His	GAT Asp	GAG GAG	TTC Phe	ACG A rg	ACG Thr	A1a	CCC A1a	GTG Val	G/A G( u	GC Y	Pro	TTT Phe	GIÇ Val	Thr	TTG Leu	GAC Asp	ATG Me (	GAA Gi u	GAC Asρ	Cys	G( y	TAC	AAC	ATT ( e	
3016 448	CCA Pro	CAG Gl n	ACA The	GAT Asp	GAG GI u	TCA Ser	ACC Thr	CTC Leu	atg Met	ACC Thr	ATA (   e	GOC Ala	TAT Tyr	GTC Val	atg Me (	GCT Ala	CCC Ala	ATC (1e	TGC Cys	GOC Ala	CTC Leu	TTC Phe	ATG Met	CTG Leu	OCA Pro	CTC Leu	
3094 474	TGC Cys	CTC	ATG Met	GTG Val	TGT Cvs	CAG Gl n	TCC	CCC A ra	TGC Cys	CTC	CCC Ara	1GC Cys	CTG	OSC Arg	CAG O n	CAG Gin	CAT His	GAT Asp	GAC Asp	TTT Phe	GCT At a	GAT Asp	GAC Aşp	ATC	TOC Ser	CTG ·	
3172		AAG	TGA	GGA(										7.													c
3275	AGAC	CAC	TCA	3GAC	20120	DOCA	COCA	CAN	\TGO	CTCT	CT	rgan	CAG2	NAOGI	VAAA	CIC	3GCA/	VOGTY	XXXII	CAC	XXX	TGT	VOCTY	TACK	SAAAC	CAGAAA	A.
3381	GAG/	VAGAV	NAGAZ	AGCA(	CICK	3CTG	33333	SAATA	+CTC	MGG	CAC	CICA	ATT	raagi	10000	CAAA	FTCT	CTC	TTGA	AACI	TCAC	2000	rgaac	CTT	CTC	CACCAT	r
3487	OCT1	TAA	ATTC	ICCA	ACCC/	AAAG:	TATIO	TICI	TTT	TTAC	TTT	CAGA	AGTAC	TOO	CATC	CAC	CAC	TTAC	crrc	GOGT	GIG	10000	IGTG	TAC	CTG	CAGAG	K
3593	AGAG		lind Wes		rrccx	CTGC:	rccc	CAAAC	FTCAC	TAG	GAGAC	<b>SGAT</b> Y	CAC	GTT	IGCT/	TTI	CTT	DAGAC	ACAG	XGAC	TGT	KAAT/	CAAC	ECT#	ACAT	TOGTO	2
3699	AAAA	ATT	XXX	TIG	\ATT/	VAAA	AAAA/	VAAC1	ragat	MGAC	TAT	TAT	CAA	\TGG(	ccc	CCI	GAAZ	GAGG	AGAA	.GGAG	AGGC	AGTZ	CAAZ	GAC	LOGG2	ATAGI	3
3805	GGAT	CAA	VGCTZ	AGGA/	AAGG	CAGA	AACAG	CAACC	CACIX	CACCA	GTCC	TAGI	TTT	¥GACX	TCAT	CTO	CAAGA	TAGO	ATCC	CATC	TCAC	AAG	\TGGC	TGT	GITI	TCAAT	3
3911	TTTT	CTT	TCT	FIGG	rroca	1GCC	rgacc	CAAAA	GTG	CATO	90GN	/œœ	TAT	CTAC	XXXX	VAGAC	CICI	TTT	TAGO	TCTC	TTA	\ATG!	VAGTO	• • • • • • • • • • • • • • • • • • •	CTAA	GAAGT	r
4017	CCAC	TTA	CAC	ATGAJ	ATTIX	CIGO	CATA	TAAT	MTC	TTG	retei	PATC	rgaac	CAC	CTT	TATT	TAC	TATO	ATAG	GCAG	CACT	GAAA	TATO	CTAP	.000	CTAAG	2
4123	TCCA	GGTX	300C	rgrg	GAG/	AGCA/	*CTG	SACTA	TAG	CAGGC	CTC	SCT	TGTC	TTO	TGGT	CATA	100C1	CACI	CTTT	0000	CAA	\TCT1	recte	TGG	GCTI	TOCAG	2
4229	CVV	CTC	TAA	NAGG/	ATAC	3GTA	GAG/	VOCIY	TIC	PATC	TAAT	CTT	LAAAC	CATA	LATG1	TGA	CAT	CATI	CAAC	AGCI	GATC	300C1	TATA	.ccc	TGO	TGGAT	- r
4335	TCTT	OCT/	ATTAC	)	ATAAC	SAAG	FAGC	\AGA1	CTT	racat	raati	CAG	·GTO	TTI	ATIC	30CT	CCT	V00C1	CICI	AATC	2000	CTO	CATTI	ATTI	GACI	TAAAGCI	Ā
4441	TCAC	ACAC	7000	CACTA	AGCA1	TAT?	AOCA/	VGAG1	TATG	\GAA!	TACE	<b>VGTG</b>	TTE	\TOOT	TCT	VACAT	TACT	rccci	TCAG	TATO	ZAAGO	CTC	CTG	EAGA	VAGGE	TOOCA	3
4547	OCTO	AGG	XTX	CTL	ATGT	) ) )	CACC	ACAAC	SAGC	roct:	rGAT(	CAAG	TCAT	CTT	TTO	200212	ATOCI	CTTC	TTO	CCIC	XXX	CTO	TAAT	OGT	OCTO	XXXXXX	- :
4653	CAGG	CTC	TTC	rigg	) TAC	<b>ETA</b>	3100	)GA(X	CAAG	TTCAT	TAX	7000	TATO	CAGTI	CTAC	CATZ	GTA	VACTA	æ	'ACCA	GTG	rtag:	roccz	VAGAC	CTC	STTTN	- e
4759	CTAC	TAT	100C/	ACTO	CATC	CTAC:	POCTA	VOCTO	)GTC	NACCX	XXX	) CTIV	CAC	TATO	XXX	CTG	CTARC	FIGIC	GAAT	TACC	TGAT	raacx	)GAG	VGGG/	\AAT!	\C\\\AGG	A
4865	<u></u>	CTC	rccr	STTO	CTCCC	) CTC	AGCC2	ACCIV	300C	ACAA	30CA1	TAAA(	CAAT	raaa?	CAAC	SAAT	ACTG/	AGTC	GTT	TTT	TCT	OGT.	icic	PICAT	rrco	CACTGC	A
4971	CTTC	CTC	TOC	TTC	3CTG/	ACTO	GAA.	CNOCK	CAT	AACT	ACAG	AGTC:	rgaci	AGGA/	AGACT	roga	GACTY	STOCE	CTTC	TAG	TOX	SAAC	TAC	CTC	CAAA7	TAAACT	T
5077	TCAC	AAC.	гости	ACCA?	TGAA	GTGA	TAAA	OCCA(	CATT	rtoc	TTA	raat:	rret/	ACCC2	ATGT	rocc	AAAA	ACTO	CTT1	TTC	CAG	эээ	rrcc	<b>1</b> 0000	LATAC	AAACTC	A
5183	<b>N</b>	CTTV	CAT	AGCA.	NGTO	CCAT	CAGO	CTAT	TATT	TTTT	TAAN	GAAA	ACTI	CAC	rigt	rttn	CTTT	TTAC	VGTT/	CTT	CTIV	OCTO	000C	AAAA	TAT	AAACTC	T

## FIG. 13C

5289	AAGTGTAAAAAAAAGTCTTAACAACAGCTTCTTGCTTGTAAAAATATGTATTATACATCTGTATTTTTAAATTCTGCTCCTGAAAAATGACTGTCCCATTCTCCAC
5395	TCACTOCATTTCCCCATTCCTCTCCATCTCTTTTATCATTCCACCCCACTGCACACACA
5501	TCTGACTGATCCTGAACAAGAAGAGTAACACTGAGGCGCTCGCT
5607	TOGGANGCAGTTAAGCCCCCTCCTCACCCCTTCCTTTTTCTTTACTCCTTTGGCTTCAAAGGATTTTGGAAAAGAAACAATATGCTTTACACTCATTTTCA
5713	ATTTCTAAATTTOCAOGOGATACTGAAAAATACOOCAGGTOGOCTAAGOCTOCTGTAAAGTTGAOGOGAGAGGAAATCTTAAGATTACAAGATAAAAAAGGAATCC
5819	CCTAAACAAAAAGAACAATAGAACTGGTCTTCCATTTTCCCACCTTTCCTGTTCATGACACCTACTAACCTGGAGACAGTAACATTTCATTAACCAAAGAAAG
5925	GTCACCTGACCTCTGAAGACCTGAGTACTCAGGCCACTCCAATCACCCTACAAGATGCCCAAGGACGTCCCAGGAAGTCCAGCTCCTTAAACTGACGCTAGTCAATA
6031	AACCTGGCCAAGTGAGCCAAGAGAATCCATCTGTGAGGTGACAGGCAGG
6137	CATTIAGTTOGGTCTGAAAGGAAAAGTNTTTGCTATOCGACATGTACTGCTAGTWCCTGTAAGCATTTTAGGTCCCAGAATGGAAAAAAAAAA
6243	ATATAATAATGANNININININININININININININITOGAGCATGCATCTAGAGGGGCCCTATTCTATAGTGTCACCTAGAATCCTAGACCTCGCTCG
6349	CTTCTAGTTGCCAGCCATCTGTTGTTTGCCCCCCCGTGCCTTCCTT
6455	${\tt GCATTGTCTGAGTAGGTGTCATTCTATTCTGGGGGGTGGGGGGGG$
6561	TCTATGGCTTCTGAGGGGGAAAGAACCAGCTGGGGCTCTAGGGGGGTATCCCCAGCGCGCTGTAGCGGGGGCATTAAGCGGGGGGTGTGGTGGTTACGCGCAGCG
6667	${\tt TGACOGCTACACTTGCCAGCGCCCCTAGCGCCCCCTTTCCCCTTTCTTCCCCTTCTTCCCCACCTTTCCCCGTCAAGCTCTAAATCGGGGCAT$
6773	COCTITAGGGTTCOGATTTAGGGCACCCCACACCCCAAAAAACTTGATTAGGGTGATGGTTCAGGTAGTGGCCCATGGCCCTGATAGACGGTTTTTCGCCCCAAAAAACTTGATTAGGGTGATGGTTCAGGTAGTGGCCCATGGCCCTGATAGACGGTTTTTCGCCCCAAAAAAACTTGATTAGGGTTGATGGTTCAGGTAGTGGCCCCATGGCCCTTGATAGACGGTTTTTCGCCCAAAAAAACTTGATTAGGGTTGATGGTTCAGGTAGTGGCCCCATGGCCCCTGATAGACGGTTTTTCGCCCAAAAAAACTTGATTAGGGTTGATGGTTCAGGTAGTGGCCCCATGGCCCTTGATAGACGGTTTTTTCGCCCAAAAAAACTTGATTAGGGTTGATGAGTAGGTTAGACGGTTTTTTCGCCCAAAAAAACTTGATTAGGGTTAGACGGTTAGACGGTTTTTTCGCCCAAAAAAACTTGATTAGGGTTAGACGGTTAGACGGTTAGACGGTTTTTTCGCCCAAAAAAACTTGATTAGGGTTGATGAGTAGGTTAGACGGTTAGACGGTTTTTTCGCCCAAAAAAAA
6879	CCTTTCACGTTCGAGTCCACGTTCTTTAATAGTCGACTCTTGTTCCAAACTCGAACACCCCAACCCTATCTCCGTCTATTCTTTTGATTTATAAGGGATTTTCG
6985	GGATTTGGGCTATTGGTTAAAAAATGAGCTGATTTAACAAAAATTTAAGGGGAATTCTAGAGGCCGCGCGCG
7197	CCTTCTTCCCCCCCCACTCCACTCACTCACTTCCTTACAACTCCCCAACTCCCCACTCTCCACCA
7409 7515	GAGGGCCTGTGTAGCTACCGATAAGCCGACCACAGAGGCCATTAGCAATAGTGTTTATAAGGCCCCCTTGTTAACCCTAAAAGGGTAGCATATCCTTCCCGGG TAGTAGTATACTATCCAGACTAACCCTAATTCAATAGCATATGTTACCCAACGGGAAGCATATGCTATCGAATTAGGGTTAGTAAAAGGGTCCTAAGGAACAGC EcoRV
7727	GATATCTOCCACOCCATGAGCTGTCACOGTTTTATTTACATOGGGTCAGGATTCCACGAGGGTAGTGAACATTTTAGTCACAAGGGCAGTGGCTGAAGATCAAGG AGGGGCAGTGAACTTCTCTGAATCTTCGCTTCTTCATTCTCTTTTAGCTAATAGAATAACTGCTGAGTTGTGAACAGTAAGGTGTGTGAGGTGCT CGAAACCAAGGTTTCAGGTGAGGCCCCCAGAATAAAATTTGGAGGGGGTTCAGTGGTGGTGTGTGT
8045 8151	Spe( ATAMATACTAGTAGGANTGANACATTCTGANTATCTTTAACAATAGANATOCATOGGGTGGGGACAAGCOGTANAGACTGGATGTCCATCTCACAGGANTTTAT GCCTATGGGCANCACTAATGCTAGTGCAATATGTACTCGGGTTATTAAGATGTGTCOCAGGCAGGAAGACAGGTGAAGCATGTTGTTACACTCTATTTGT ANCAGGGAAAGAGAGTGGAGGGGCAAGCAGGGGACCAATGAGGCAGGAAGCAAGTTGTTACACTCTATTTGT ANCAGGGAAAGAGAGTGGAGGGGCAAGCAGGGGAACCAATGAGGAGCAAGACAGGGGAAGCAAGTTGTTACACTCTATTATAACAAA GACAAGTGGGCACTCTTTTTTTTGAAATTGTGGAGTGGGGGCAGGGGTCAGCCCCCACGGGGGCGCGGGTTTTTGGACTGTAAAATAAGGGTTAATAACTTGG
8363	CTGATTGTAACCCCCTAAACCACTGCCGTCAAACCACTTGCCCACAAAACCACTAATGGCACCCGGGGAATACCTGCATAAGTTAGGTTGGCCCCCCAACGATAGGG GCCCCATTGCTGCGATCTGCAGGACAAATTACACACACTTGGCCCTGAGCCCCCAAGCACGGTTGTTGGTCCTCATATTCACGAGGTCCCTGAGACCACGGTGGG
8575	CTAATGTTGCCATGGGTAGCATATACTAGCCAAATATCTGGATAGCATATGCTAATCTAATCTAATCTATATCTGGGTAGCATAGGCTATCCTAATCTATATCTGGGTAGC ATATGCTATCCTAATCTATATCTGGGTAGTATATGCTATCCTAATTTATATCTGGGTAGCATAGGCTATCCTAATCTATATCTGGGTAGCATATGCTAATC
8787	TATATCTOGGTAGTATATGCTATGCTAATCTGTATCCGGTAGCATATGCTATGCTAATAGAGATTAGGGTAGTATATGCTATGCTAATTTATATCTGGGTAGCAT
8999	ATACTACCCAAATATCTGGATAGCATATGCTATCCTAATCTGATATCTGGTAGCATATGCTATCTGATCTATCT
9105	TCCTAATCTATATCTGGGTAGTATATCCTATCCTAATCTGTATCCGGTAGCATATCCTATCCTATCCATATACAGTCACCATATGATACCCAGTAGTAGAGTCG
9211	Gite P CAGTOCTATCCTTTCCATATCCCCCCCCCAACCCCCCAACCCCCC
9317	ACCOCCACCTAAACCCCTCACTCCCCATCCCCCCCCCCC
9423	TOGGTATOCCCAATTOCCCCATGTTOCCCACCACCACAAAATCGTCACCACCACCACCACCACCACCACCACCACCACCACCAC
9529	AGTÓCOCCGGAATACACCCCTTTTAATACGATTGACCCCCTCACCACTACAACTTACATCACCTCCTTCCCTCACCTCCATCACCTCCT
9635	TCATCTCCCTCATCACCCTCCCCCCCCCCCCCCCCCCACACCCCCC
9741	ACCTACCACCCCCTTTCTCATAACAACGTCCTTAATCCCATCCTTCAAAACCTCACCAAATATATGACTTTGTAAAAACACCATGAAATAACACACCAATCCACTC

## FIG. 13D

9847	${\tt CCTTACCOCCCCACCTTGTCCCCCCCCCCCCCCCCCCCCC$
9953	ACCTTCT/AAACGCACGTCTTACTACCTCCATATACGAACACACCCCCCAACTTCCTTC
10059	AAOCTTCTOCAATGTTCTCAAATTTCOCGTTCGAACCTCCTTCACCACGATGCTTTCCAAACCACCCTCCTTTTTTTCCCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCCTCCATCACCAC
10165	${\tt TCCAGTGCTTGGGCCTTCTGCTGGGGCAGCTGCTGCTGTATGGCTGCCGGGGCAGGTCAGGCTGAGGCTGAGGCTGAGGCTGAGAAAA}$
10271	${\tt TAATOOSCTTOCCCTACAGOGTOGAAAAATOOCCTTCTACCTOGAGOGGGCCTGCGGGGCTCGAGACCCGGATGATGACTACTGACTACTGGGACTCCTGGGCCTCTT$
10377	$\tt TTTCTCCACGTCCACGACCTCTCCCCCTCCCTCTTTCACGACTTCCCCCTCCTCTTTCACGTCCTCTACCCCCCCC$
10483	${\tt TCCACTACCTOCTGGACCCGGCCTCCACTGCTCCTCCTCCTCCTCCTCCTCCTCCTCCTCCTCCTCC$
10589	
10695	chochochochochochochochochochochochochoc
10801	TOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCT
10907	G
11013	c r c c c c c c c c
11119	${\tt TCCTOCCCCTCCTCCTCCTCCTCCTCCTCCTCCTCCTCCT$
11225	OCCOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTO
11331	CTGAGCCGGCCCTCCTCCTCCTCCTCCTCCTCCTCCTCCTCCTC
11437	GCCTTCTGGTGCAGATGTGTCTCCCTTCTCTCTCTAGGCCATTTCCAGGTCCTGTACCTGGCCCCTCGTCAGACATGATTCACACTAAAAGAGATCAATAGACATCT
11543	TTATTAGAOGACGCTCAGTGAATACAGGGAGTGCAGACTCCTGCCCCCTCCAACAGCCCCCCCC
11649	GAAAATTCCCCATCCTCCGAACCATCCTCGTCCTCATCACCAATTACTCGCAGCCCCGAAAACTCCCGCTGAACATCCTCAAGATTTGCCTCCTGAGCCTCAAGCC
11755	ACCOCTICA A ATTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOCTOC
11861	C1al  AACGGAAGAAAAGCTGGGGGCCTGTGAGGATCAGCTTATCGATGATAAGCTGTCAAACATGAGAATTCTTGAAGACGAAAAGGGCCTCGTGATACGCCTATTTT
	TATAGGTTAATGTCATGATAATAATGGTTTCTTAGAGGTCAGGTGGCACTTTTCGGGGAAATGTGCGGGGAACCCCTATTTGTTTATTTTTCTAAATACATTCAAA
	TATGTATOCOCTCATGAGACAATAACCCTGATAAATCCTTCAATAATATTGAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTT GCCCCCATTTTGCCTTCCTGTTTTTGCTCACCCAGAAACCCTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTTACATCGAACTGGATCTCA
	ACAGOGGTAAGATOCTTGAGAGGTTTTOCCCCGGAAGAAGGTTTTCCAATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTGTTGACGCCCGG GCAAGAGCAACTCGGTCGCCCCATACACTATTCTCAGAATGACTTGGTTGAGTACTCACCAGTCACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTA Pyu1
	TICCACTIOCCATAACCATGACTIGACTIGACACTGOGGCCAACTTACTTCTGACAACGATCGGGGGGCGACGGAGGGGCTAACGCTTTTTTTCCACAACATGGGGGGTC ATGTAACTGGCCTTGATGGTTGGGAACCGGGGCTGAATGAA
	ATTAACTGCGCAACTACTTACTCTAGCTTCCGGCAACAATTAATACACTGCATGCA
	TOGTTTATTOCTGATAAATCTOGAGOOGTGAGOGTGGGTCTOOOGGTATCATTOCAGCACTGGGGCCAGATGGTAAGCCCTCOCGTATOGTAGTTATCTACACGA OOGGGGTCAGGCAACTATGGATGAACGAAATAGACAGATCGCTGAGATAGGTCOCTCACTGATTAACATTAGGTAACTGTCAGACCAAGTTTACTCATATATACT
	TIAGATTGATTAAAACTTCATTTTTAATTTAAAAGGATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAAATCCCTTAACGTGAGGTTTTCGTTCACCTGA
	GOGTCAGACOCOGTAGAAAAGATCAAAGGATCTTCTTGAGATOCTTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAAA
	GTTTGCCCGCATCAAGAGCTACCAACTCTTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCCCAGATACCAAATACTGTCCTTCTAGTGTAGCCGTAGTTAGGCCACCA CTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCAATCCTGTTACCAGTGCCTGCTGCCAGTGCCGATAAGTCGTGTCTTACCGGTTTGGACTCAAGA
13451	OGATAGTTACOOGATAAGGCCCAGCGGTCGGGCTGAAGGGGGGGTTCGTGCACAGCCCAGCCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTG
	ACCTATGAGAAAGCCCACCCTTCCCGAAGGGGAAAGCCGGACAGGTATCCCGTAAGCCCCACGGTCCGACAGGAGCCCCCACGAGGGAGCTTCCAGGGGGAAA CCCCTGGTATCTTTATAGTCCTGTCGGGTTTCCCCACCTCTGACTTCGAGGTCGATTTTTGTGATCTCGTCAGGGGGGGG
	$ \begin{array}{lll} GOSOCCTITITIAGGITTOCTOSOCCTITITOCTOSOCCOSOCTIOCACGATICGACATATGGACATATGTTCTGCCAAGGGTTGGGTT$
	TCTODOCAACAATTGATTGOCTOCAATTCTTGCAGTGGTGAA1OGTTAGGGAGGGGGGGGGGGGGGGGGGGTTCCAGTGCAGGTGGAGGTGGAGGGGGGAC
	GCAACCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
14193	N to 1)  ATGCCCCCCCAGGAGAGAAGAATCATAATGGGGAAGGCCATCCAGCCTGGGGTGGGGGGCCAGCAAGAGCTAGCCCAGCAAGAGCTAGCCCAGCGAGAGAGA
14299	TOCCOGTOGOCOGTTOCTOGOCGTTTGCTGGCCGTGTCCCCCGAAGAAATATATTTGCATGTCTTTAGTTCTATGATGACACAAACCCCGCCCAGCGTCTTGTCATT
14405	GOCCANTTOGAACAGGCAGATOCAGTTCGGGGGGGGGGGGGGGGGG
14511	COCCTTAACAGOGTICAACAGOGTICOCOCAGATCCOCGOCAATTGAGATATGAAAAAGCCTGAACTCACCGCGACGTCTGTCGAGAAGTTTCTGATCGAAAAAGTTCGA
14617	CASCITCTCCGACCTGATGCAGCTCTCCGAGGGCGAAGAATCTCGTGCTTTCAGCTTCGATGTAGGAGGGGCTGGATATGTCCTGCGGGGTAAATAGCTGCGCCGGAT
14723	CCTTTCTACAAAGATCGTTACTCCGGATCCCCACTTTCCATCCCCCCCC
14829	Pvul atctcccccctgacaggtgtcaggtggcaggtggcaggtggcaggcggagggggggg
14935	ATCTTAGCCAGACGACGCCTTCOGCCCATTCOGACGCCAAGGAATCCGTCAATACACTACATCCCTGATTTCATATCCCCCGATTTCTTCATCATCATCATCATCATCATCATCATCATCAT

## FIG. 13E

15041	CTGGCAAACTGTGATGACCACACCGTCAGTGGGTCGGGTCGGCAGGCTCTCGATGAGCTGATGCTTTGGGCGGAGGACTGCCGCGAAGTCCGGCACACTCGTTGCACCACACACTGGTGCACCACACACA
15147	COCCATTTCCCCTCCAACAATGTCCTGACCGACAATGCCCCCATAACACCCGTCATTGACTCGAGCGAG
15253	TCTTCTTCTGCAGGCGGTGGTTGGCGGGGCAGCAGCAGCAGGCGCTACTTGGAGGGGAGGCATCGGGAGGCTTGCAGGATCGCGGGGGGTATATGCT
15359	COOCATTOGTCTTGACCAACTCTATCAGAGCTTGGTTGACGGCAATTTGGATGCAGCTTGGGGGGGG
15465	ACTGTCCCCCTACACAAATCCCCCCCACAAGCCCCCCCTCTCCACCCATCCCTCTTACAAGTACTCCCCCATAGTCGAAAACCCCGACATCCCCCCAAAACCCCGACACCCTAACTC
15571	AAACACGGAAGGAGACAATACCGGAAGGAACCGGGCTATGACGGCAATAAAAAGACAGAATAAAAACGCACGGGTGTTGGGTCGTTTGTTCATAAAACGCGGGGTTC
15677	CCTCCCACCCCTCCCCACTCTCTCCATACCCCACCCACC
15783	COCAGGETOSCAGOCAACGTOSGGGGGGCCTGCCATAGCCACTGGCCCCTTGGCTTAGGGACGGGGCTCCCCCATGGGGAATGGTTTATGGTTGGT
15889	TTATTATTTTGGGGGTGGGGTCTGGTGCAGGACTGGACT
15995	Sall CANCHOCOCCOCTCTCTCCCAAACACCCCCCACCCCAAAAAACCACCCCCC

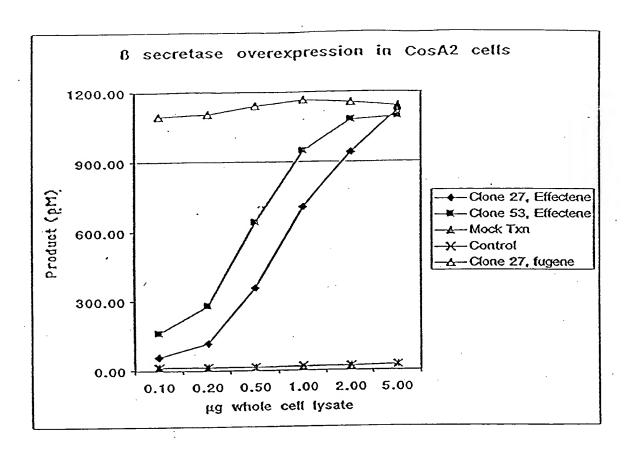


FIG. 14

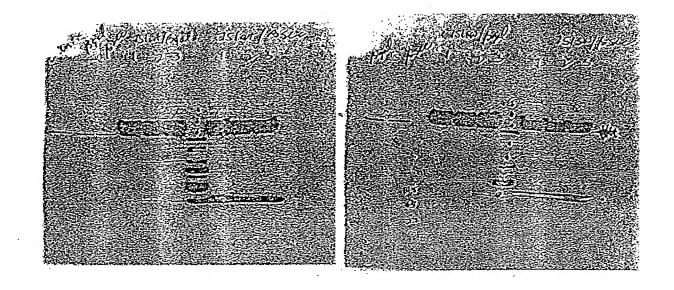


FIG. 15A

FIG. 15B

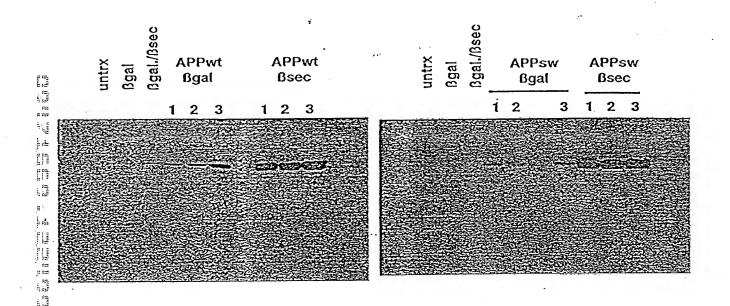


FIG. 16A

FIG. 16B

ਙ	APPwt Bgal	APPwt ßsec ⊹	ਬ	f	lbb Bg:			APPsw ßsec			
ßgal	1 2 3	1 2 3	Bg	1	2	3	1	2	3		
· ·			 · •			<b>(ح)</b>					





FIG. 17A

FIG. 17B

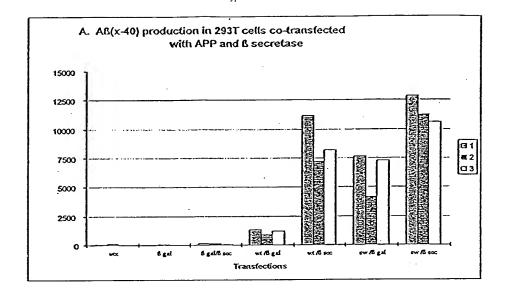


FIG. 18

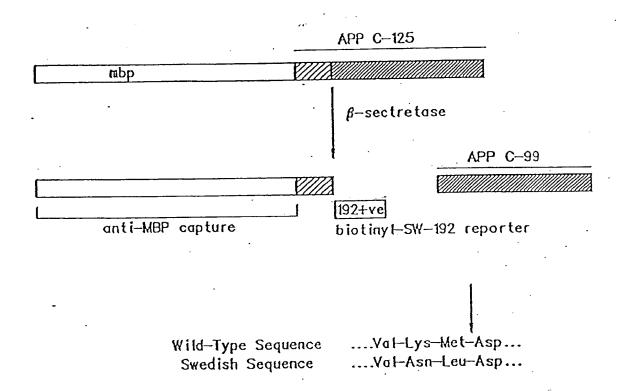


FIG. 19

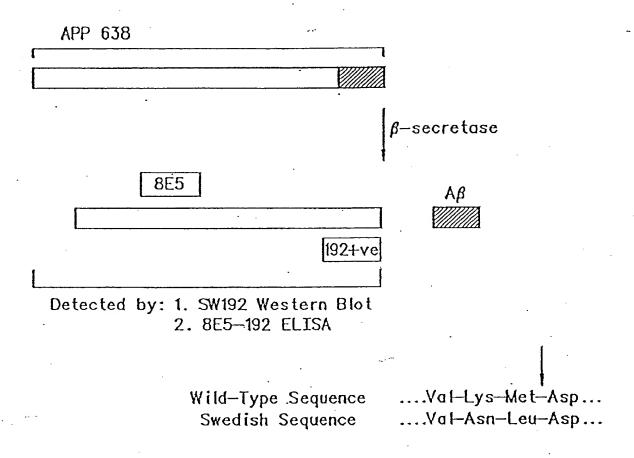


FIG. 20

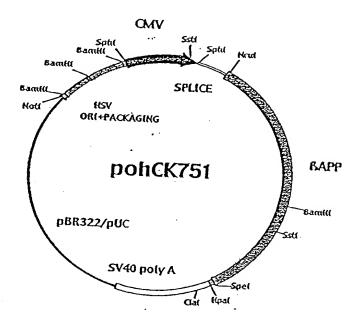


FIG. 21